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10/608,537

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Takeshi Sasaki

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KENYON & KENYON

1500 K STREET NW

SUITE 700

WASHINGTON, DC 20005

EXAMINER

PADMANABHAN, KAVITA

ART UNIT

PAPER NUMBER

2161

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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                       |                                      |  |
|------------------------------|---------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/608,537  | <b>Applicant(s)</b><br>SASAKI ET AL. |  |
|                              | <b>Examiner</b><br>Kavita Padmanabhan | <b>Art Unit</b><br>2161              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-27 have been examined.
2. Claims 1-27 are rejected.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. **Claims 1-3, 6-7, 10-12, and 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kikuchi et al.** (US 2002/0010740, hereinafter “Kikuchi”) **in view of Hoth et al.** (US 2004/0030716, hereinafter “Hoth”).

In regards to **claim 1**, **Kikuchi** teaches a method for synchronizing data between a network server and a client terminal (**Kikuchi; Fig. 1**), comprising:

- receiving a plurality of object instances from the network server (**Kikuchi; par [0179]**);
- selecting at least one object instance from the plurality of object instances (**Kikuchi; par [0184], lines 1-11 - where the rows corresponding to these conditions are instances of objects represented in the database and are logically selected by search condition**); and
- for each selected object instance:
  - searching the plurality of object instances to identify related object instances (**Kikuchi; par [0184], lines 5-11**),
  - sorting the related object instances (**Kikuchi; par [0185], lines 1-5**),
  - sending the sorted object instances to the personal computer (**Kikuchi; par [0185], line 11 – par [0186], line 3**), and
  - sending the selected object instance to the personal computer (**Kikuchi; par [0185], line 11 – par [0186], line 3 – the data corresponding to the genre/portable device type selected is sent**).

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Kikuchi does not expressly teach searching the plurality of object instances to identify related object instances being done recursively or the object instances being sent to a mobile device.

**Hoth** teaches a computer being a portable computer (**Hoth; par [0058], lines 4-12**) and also teaches searching for related data based on primary key and foreign key relationships (**Hoth; par [0091]**).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the method Kikuchi using the portable computer of Hoth as a mobile device with which to synchronize data and to search for related data recursively based on hierarchical primary key/foreign key relationships, thereby providing the convenience of mobile technology and also allowing for data to be represented and searched in a hierarchical database system (**Hoth; par [0039], lines 1-3; par [0090], lines 1-3**).

In regards to **claim 2**, **Kikuchi and Hoth** teach the method of claim 1, wherein each of the plurality of object instances has a key and a plurality of data elements (**Kikuchi, par [0179] – plurality of data elements; Hoth, par [0091] – primary keys - obvious that the music data of Kikuchi could be stored in multiple tables, as in Hoth, with primary keys**).

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In regards to **claim 3, Kikuchi and Hoth** teach the method of claim 2, wherein said selecting includes filtering the plurality of object instances based on at least one data element (**Kikuchi; par [0184]**).

In regards to **claim 6, Kikuchi and Hoth** teach the method of claim 2, wherein the data element of at least one of the plurality of object instances includes a reference to a related object instance (**Hoth; par [0091] – reference is foreign key**).

In regards to **claim 7, Kikuchi and Hoth** teach the method of claim 6, wherein the reference is the key of the related object instance (**Hoth; par [0091]**).

**Claims 10-12 and claims 19-21** are rejected with the same rationale given for claims 1-3, respectively.

6. **Claims 4, 13, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kikuchi in view of Hoth, and further in view of Sacks** (US 5,974,407).

In regards to **claim 4, Kikuchi and Hoth** teach the method of claim 2. Kikuchi and Hoth do not expressly teach the sorting being based on a hierarchical relationship to the selected object instance.

**Sacks** teaches sorting related data hierarchically (**Sacks; col. 25, lines 26-30**).

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Since the data of Kikuchi and Hoth could be hierarchical in nature, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the method of Kikuchi and Hoth by sorting the data in a hierarchical manner, as taught by Sacks, in order to display results within a hierarchical family in the correct order (**Sacks; col. 25, lines 29-30**).

**Claim 13 and claim 22** are rejected with the same rationale given for claim 4.

7. **Claims 5, 8-9, 14-18, and 23-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kikuchi in view of Hoth, and further in view of Berger et al.** (US 2003/0172092, hereinafter "Berger").

In regards to **claim 5**, **Kikuchi and Hoth** teach the method of claim 2. Kikuchi and Hoth do not expressly teach extracting object instances previously sent to the mobile device from the sorted object instances.

**Berger** teaches determining data that has previously been sent to a client (**Berger; par [0024], lines 3-6**).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the method of Kikuchi and Hoth using this feature of **Berger** to allow more efficient and effective communication between the server and the client (**Berger; par [0024], lines 6-9**).

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In regards to **claim 8, Kikuchi, Hoth, and Berger** teach the method of claim 5, further comprising:

- associating a synchronization key with each of the plurality of object instances **(Hoth; par [0091] – primary key constitutes synchronization key, and it's obvious that every object instance could be identified using a primary key).**

In regards to **claim 9, Kikuchi, Hoth, and Berger** teach the method of claim 8, wherein the reference is the synchronization key associated with the related object instance **(Hoth; par [0091] – foreign key is the primary key of another record, i.e. the synchronization key of the related object instance).**

**Claims 14, 17, and 18 and claims 23, 26, and 27** are rejected with the same rationale given for claims 5, 8, and 9, respectively.

In regards to **claim 15, Kikuchi, Hoth, and Berger** teach the computer-readable medium of claim 14, wherein the data element of at least one of the plurality of object instances includes a reference to a related object instance **(Hoth; par [0091] – reference is foreign key).**

In regards to **claim 16, Kikuchi, Hoth, and Berger** teach the computer-readable medium of claim 15, wherein the reference is the key of the related object instance **(Hoth; par [0091]).**



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**Claims 24-25** are rejected with the same rationale given for claims 15-16, respectively.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kavita Padmanabhan whose telephone number is 571-272-8352. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kavita Padmanabhan  
Assistant Examiner  
AU 2161

*KP*  
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December 2, 2005

*Uyen Le*

UYEN LE  
PRIMARY EXAMINER